REMARKS

Claim Rejections

Claims 1 and 15-22 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Pat. No. 6,701,046 to Pianciola *et al.* ("Pianciola") in view of U.S. Pat. Pub. No. 2002/0136508 to Donno *et al.* ("Donno").

In the § 103(a) rejection of claim 1, the Examiner concedes that Pianciola does not explicitly teach the claimed propagation constant difference but alleges that Donno cures the deficiencies of Pianciola. The Examiner further alleges that "it is inherent that, if the optical fibers *were to be* fusion elongated in a range of 50% or less, the propagation constant would still be less than 10^{-4} rad/um. There is no indication in the prior art that the propagation constants would increase over the claimed threshold due to different elongation ratios" (Office Action, page 3, first full paragraph). Further, in the Response to Arguments section of the Office Action, the Examiner states that "Applicant does not positively claim this elongation ratio, since the desired propagation constant is intended result of a particular elongation ratio. The language "when" suggests a theoretical test value that may, or may not, be applied" (Office Action, pages 4-5, paragraph 5).

Applicants have amended claim 1 to claim a fusion elongation range of 50% or less. Also, Applicants direct the Examiner to figures 14-21 of the specification which present data indicating that the propagation constant difference varies with elongation ratio, and generally increases at higher elongation ratios.

Further, Applicants respectfully submit that Donno does not address a fusion elongation range for the fusion of the first and second optical fibers. Donno is directed to the modification

of a cross-section of one of the two optical fibers ***prior to*** the fusion elongation operation which results in the optical fiber coupler (paragraph [0028]). As disclosed by Donno, the cross-section of the first optical fiber is modified prior to forming the optical coupler such that when the fusion elongation process to form the optical coupler is performed, a preferred propagation constant difference may be achieved (paragraph [0035-0037]). Therefore, Donno merely discloses that one of the optical fibers may be tapered by an elongation process prior to the fusion elongation process which forms the optical coupler (paragraph [0050-0054]).

Thus, Donno fails to disclose or suggest ***any*** fusion elongation range for forming the optical coupler. Contrary to the Examiner's assertion, then, it cannot be inherent in Donno's disclosure that fusion elongation of the optical fibers in the range of 50% or less would result in the desired propagation constant difference.

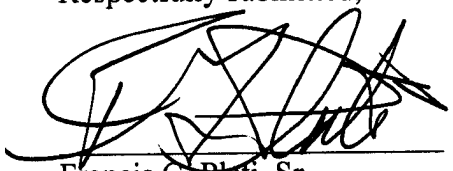
Thus, the combination of Pianciola and Donno fails to disclose or suggest wherein the λ_1-band and λ_2-band optical fibers in the plurality of optical fibers have a propagation constant difference therebetween of 1×10^{-4} rad/μm or smaller at a fusion elongating ratio in a range of 50% or less, as recited in claim 1. Therefore, claim 1 is patentable over the combination of Pianciola and Donno. Claims 15-22 which depend from claim 1 are patentable at least by virtue of their dependence.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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